

<b>DECLARATION FOR UTILITY PATENT APPLICATION (37 C.F.R. 1.63)</b>		Attorney Docket No.	I69.12-0577
		First Named Inventor	Chunhong Hou
		COMPLETE IF KNOWN	
<input checked="" type="checkbox"/> Declaration Submitted with Initial Filing	Declaration Submitted after Initial Filing (Surcharge (37 C.F.R. 1.16(e)) Required)	Application Number	
		Filing Date	Herewith
		Group Art Unit	
		Examiner Name	

As a below named inventor, I hereby declare that my residence, post office address, and citizenship are as stated below.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:  
MAGNETIC SENSOR WITH ADJUSTABLE ELECTRICAL DIMENSIONS

the specification of which:

☒ is attached hereto OR

was filed on as United States Application Number or PCT International Application Number and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Certified Copy Attached? Yes No

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)


I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

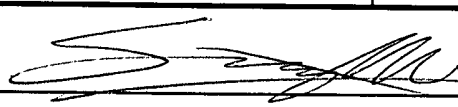
U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)


DIRECT ALL CORRESPONDENCE TO:

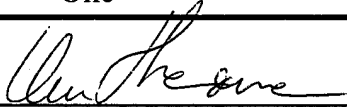
Customer Number	00164
Attention	David R. Fairbairn
Telephone	(612) 339-1863
Fax	(612) 339-6580

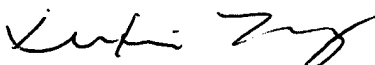
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

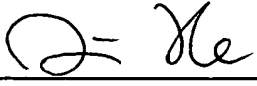
<b>Sole or First Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Chunhong	Hou
Inventor's signature	 Date: 9/3/03
Residence	Savage, Minnesota Citizenship: China
Mailing Address	8832 Carriage Hill Road
City, State, Country	Savage, Minnesota 55378, U.S.A.

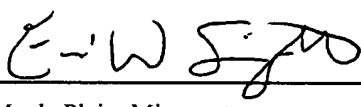
<b>Second Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Sining	Mao
Inventor's signature	 Date: 10-3-03
Residence	Savage, Minnesota Citizenship: U.S.
Mailing Address	13927 Aquila Avenue
City, State, Country	Savage, Minnesota 55378, U.S.A.


<b>Third Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Eric S.	Linville
Inventor's signature	 Date: Oct 06, 2003
Residence	Chanhassen, Minnesota Citizenship: U.S.
Mailing Address	280 Hidden Lane
City, State, Country	Chanhassen, Minnesota 55317, U.S.A.

<b>Fourth Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Olle	Heinonen
Inventor's signature	 Date: Oct 03, 2003
Residence	Eden Prairie, Minnesota Citizenship: U.S.
Mailing Address	15824 Park Terrace Drive
City, State, Country	Eden Prairie, Minnesota 55346, U.S.A.

<b>Fifth Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Xuefei	Tang
Inventor's signature	 Date: Oct 07, 2003
Residence	Eden Prairie, Minnesota Citizenship: China
Mailing Address	12648 Stoney Way
City, State, Country	Eden Prairie, Minnesota 55347, U.S.A.

<b>Sixth Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Qing	He
Inventor's signature	 Date: 10-7-03
Residence	Plymouth, Minnesota Citizenship: China
Mailing Address	3845 Black Oakes Lane
City, State, Country	Plymouth, Minnesota 55446, U.S.A.

<b>Seventh Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Eric W.	Singleton
Inventor's signature	 Date: 10-7-03
Residence	Maple Plain, Minnesota Citizenship: U.S.
Mailing Address	3035 Lakeshore Avenue
City, State, Country	Maple Plain, Minnesota 55359, U.S.A.

<b>Eighth Inventor:</b>	
Given Name (First and middle (if any))	Family Name or Surname
Song S.	Xue
Inventor's signature	 Date: 10/3/2003
Residence	Eden Prairie, Minnesota Citizenship: P.R. China
Mailing Address	11447 Anderson Lane Parkway, #270
City, State, Country	Eden Prairie, Minnesota 55344, U.S.A.

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor : Chunhong Hou Appln. No. : Filed : Herewith Title : BIASING FOR TRI-LAYER MAGNETORESISTIVE SENSORS Docket No. : I69.12-0577	Group Art Unit: Examiner:
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## SUBMISSION UNDER 37 C.F.R. 3.73(b)

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Seagate Technology LLC, a Delaware corporation, is an owner of the patent application identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application identified above, a copy of which is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy of which is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy of which is attached.

-2-

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy of  
which is attached.

The undersigned (whose title is supplied below) is empowered to sign this statement on  
behalf of Seagate Technology LLC.

Signature:

  
Paul T. Dietz, Reg. No. 38,858

Date: Oct 21, 2003

Title:

Patent Attorney

## ASSIGNMENT

Attorney Docket No. : 169.12-0577

Seagate Docket No. : SEA 11167.00

WHEREAS, we Chunhong Hou, 8832 Carriage Hill Road, Savage, Minnesota 55378, U.S.A., Sining Mao, 13927 Aquila Avenue, Savage, Minnesota 55378, U.S.A., Eric S. Linville, 280 Hidden Lane, Chanhassen, Minnesota 55317, U.S.A., Olle Heinonen, 15824 Park Terrace Drive, Eden Prairie, Minnesota 55346, U.S.A., Xuefei Tang, 12648 Stoney Way, Eden Prairie, Minnesota 55347, U.S.A., Qing He, 3845 Black Oakes Lane, Plymouth, Minnesota 55446, U.S.A., Eric W. Singleton, 3035 Lakeshore Avenue, Maple Plain, Minnesota 55359, U.S.A., and Song S. Xue, 11447 Anderson Lane Parkway, #270, Eden Prairie, Minnesota 55344, U.S.A. are the inventor(s) of an invention entitled BIASING FOR TRI-LAYER MAGNETORESISTIVE SENSORS that is the subject matter of: (Check all that apply)

- ☐ a provisional application for Letters Patent which is identifiable in the United States Patent and Trademark Office by Application No. ☐ filed on ☐ ;
- ☒ an application for Letters Patent which has been executed on even date herewith and/or is identifiable in the United States Patent and Trademark Office by Application No. ☐ filed on ☐ ;
- ☐ an international application for Letters Patent filed pursuant to the Patent Cooperation Treaty which is identifiable in the United States Receiving Office by Application No. ☐ filed on ☐ ; and

WHEREAS, Seagate Technology LLC, a limited liability company organized and existing under the laws of the State of Delaware and the United States of America, and having offices at 920 Disc Drive, Scotts Valley, California, 95066 USA, ("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the applications, and any and all Letters Patent or similar foreign or domestic legal protection;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, we transfer to Assignee, its successors and assigns, our entire right, title and interest in and to the invention, the above-identified applications, all provisional applications from which any of the above-identified applications claim priority, corresponding domestic and foreign applications, any continuation, division, renewal, or substitute for the applications, all Letters Patent, any reissue, re-examination, or similar legal protection issuing related to the Letters Patent, and all rights and benefits under any applicable treaty or convention; and we authorize the Director of the United States Patent and Trademark Office or foreign equivalent to issue the Letters Patent or similar legal protection to the Assignee.

We authorize the Assignee, its successors and assigns, to insert in this instrument the filing date(s) and application numbers when ascertained. We further authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries and appoint Assignee the common representative in the above identified international application and any international application for the invention.

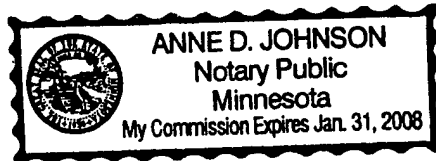
We represent to the Assignee, its successors and assigns, that we have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. We, our executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute and deliver to Assignee or its legal representatives such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries, including without limitation providing testimony in any related interference, litigation or proceeding.

Chunhong Hou

Chunhong Hou (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 3<sup>rd</sup> day of October, 2003.

(SEAL)



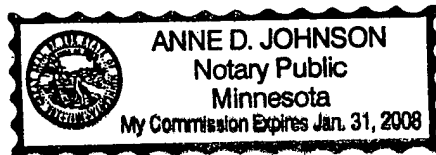
Anne D. Johnson  
Notary Public  
10/3/03

Sining Mao

Sining Mao (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 3<sup>rd</sup> day of October, 2003.

(SEAL)



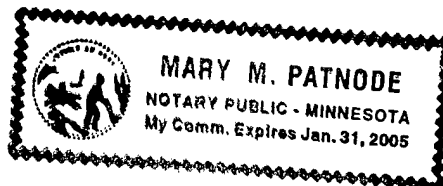
Anne D. Johnson  
Notary Public  
10/3/03

Eric S. Linville

Eric S. Linville (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 8<sup>th</sup> day of October, 2003.

(SEAL)



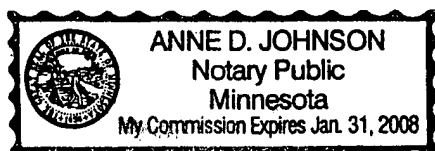
Mary M. Patnode  
Notary Public

Olle Heinson

Olle Heinson (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 3<sup>rd</sup> day of October, 2003.

(SEAL)



Anne D. Johnson  
Notary Public  
10/3/03

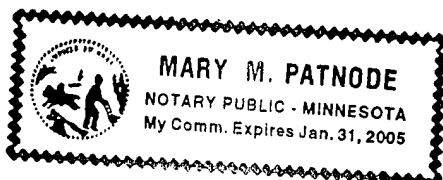


Xuefei Tang  
Xuefei Tang (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 7<sup>th</sup> day of October, 2003.

Mary M. Patnode  
Notary Public

(SEAL)

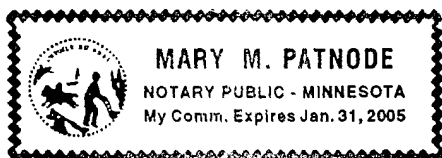


Qing He  
Qing He (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 7<sup>th</sup> day of October, 2003.

Mary M. Patnode  
Notary Public

(SEAL)

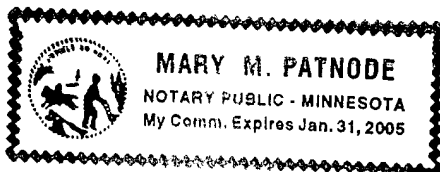


Eric W. Singleton  
Eric W. Singleton (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 7<sup>th</sup> day of October, 2003.

Mary M. Patnode  
Notary Public

(SEAL)

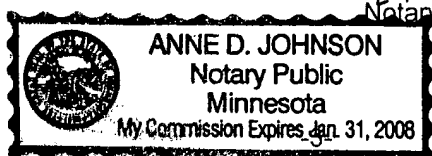


Song S. Xue  
Song S. Xue (Inventor)

Subscribed and sworn to before me in the County of Hennepin, a Notary Public, this 3<sup>rd</sup> day of October, 2003.

Anne D. Johnson  
Notary Public

(SEAL)



10/3/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named  
Inventor : Chunhong Hou

Appln. No. :

Filed : Herewith

Title : BIASING FOR TRI-LAYER  
MAGNETORESISTIVE SENSORS

Docket No. : I69.12-0577

Group Art Unit:

Examiner:

**ASSOCIATE POWER OF ATTORNEY OR AGENT (37 C.F.R. 1.34)**

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please recognize as Associate Attorney or Agent in this case:

Raghunath S. Minisandram, Reg. No. 38,683

Shawn B. Dempster, Reg. No. 34,321

Paul T. Dietz, Reg. No. 38,858

Brendan J. Hanley, Reg. No. 52,429

Derek J. Berger, Reg. No. 45,401

Joseph F. Villella, Jr., Reg. No. 30,599

Kirk A. Cesari, Reg. No. 47,479

David K. Lucente, Reg. No. 36,202

Jesus Del Castillo, Reg. No. 51,504

Mitchell K. McCarthy, Reg. No. 38,794

Carol I. Bordas, Reg. No. 37,284

Jennifer M. Buenzow, Reg. No. 50,124

First Named Inventor: Chunhong Hou

Appln. No.:

- 2 -

Please continue to send all further correspondence regarding this application to the below-named attorney.

Respectfully submitted,

KINNEY & LANGE, P.A.

By:

A handwritten signature in dark ink, appearing to read 'D. Fairbairn', written over a horizontal line.

David R. Fairbairn, Reg. No. 26,047

THE KINNEY & LANGE BUILDING

312 South 3rd Street

Minneapolis, MN 55415-1002

Telephone: (612) 339-1863

Fax: (612) 339-6580

DRF:PGK:mam

# POWER OF ATTORNEY

Attorney Docket No.

I69.12-0577

First Named Inventor : Chunhong Hou

Title : BIASING FOR TRI-LAYER MAGNETORESISTIVE SENSORS

In the patent application:

☒ identified above (and submitted to the Patent and Trademark Office herewith).☐ filed on \_\_\_\_\_ as Application No. \_\_\_\_\_.

I appoint the attorneys and agents associated with Customer Number 00164 to prosecute the patent application identified above and to transact all business in the Patent and Trademark Office connected therewith, including full power of association, substitution and revocation.

I ratify all prior actions taken by Kinney & Lange, P.A. or the attorneys and agents mentioned above in connection with the prosecution of the above-mentioned patent application.

I authorize Kinney & Lange, P.A. to mark the appropriate space above and to insert the filing date and application number of the application, as appropriate.

I aver that I am empowered by Seagate Technology LLC to act on behalf of the Assignee, Seagate Technology LLC, in connection with this document and the above application.

Please address all correspondence and telephone calls to Customer Number 00164, attention David R. Fairbairn, Telephone (612) 339-1863, Fax (612) 339-6580.

SEAGATE TECHNOLOGY LLC

Signature: \_\_\_\_\_

Paul T. Dietz, Reg. No. 38,858

Dated: \_\_\_\_\_

Oct 21, 2003

Title: Patent Attorney